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ABSTRACT FORM FOR ALL GSA MEETINGS IN 1988

Complete sections [1] through [7] below

[1] TYPE ABSTRACT within blue lines — they're absolute! Mail flat, reinforced.

№ 7397

PALEOCENE STRATA BENEATH THE SAVANNAH RIVER PLANT, COASTAL PLAIN OF SOUTH CAROLINA

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Paleocene deposits are present in the subsurface beneath all or almost all of the Savannah River Plant area. Dinoflagellates and pollen suggest that both Midwayan and Sabinian strata are present. At the type locality of the Ellenton Formation of Siple (1967), the deposits are friable, light-to-dark gray sand, interbedded with medium-to-dark gray mud. The sand is medium-to-coarse grained, poorly sorted, immature, micaceous quartzarenite. Matrix forms 15-30% of the total rock and is composed of kaolinite and minor cristobalite. Accessory constituents are lignite, carbonaceous debris, clay clasts, feldspar, pyrite, garnet, zircon, tourmaline, and iron oxides. In places on the plant, the sand is glauconitic. The mud deposits consist of quartz silt, and muscovite set in a kaolinitic matrix; it commonly contains carbonaceous debris, cristobalite, pyrite, and thin lenses of fine, micaceous quartzarenite.

At the type locality, the Ellenton can be divided into four units, defined by lithologic and paleontologic changes. The uppermost unit contains dinoflagellates suggesting a Sabinian age. The three Midwayan units may correspond to the TA1.1, TA1.2, and TA1.3 of Haq et al. (1987). Midwayan deposits appear to occur throughout the plant, except perhaps near the northern boundary. They are 60 ft (18 m) thick near the middle of the plant and 100 ft (30 m) thick in downdip wells.

Upper Paleocene strata in down-dip wells are about 50 ft (15 m) thick and appear to pinch out near the middle of the plant. In the wells with thick sections, there are two units. Each is composed of a light gray, muddy sand which fines upward and is overlain by light gray mud. The two units may represent two of the older TA2 sequences of Haq et al. (1987).

[2] CATEGORIZE ALL ABSTRACTS —Check ONE discipline below which reviewers would be qualified to evaluate this abstract

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- ☐ 10 geophysics
- ☐ 11 geoscience information
- ☐ 12 glacial geology
- ☐ 13 history of geology
- ☐ 14 hydrogeology
- ☐ 15 marine geology
- ☐ 16 micropaleontology
- ☐ 17 mineralogy/crystallography
- ☐ 18 oceanography
- ☐ 19 paleontology/paleobotany
- ☐ 20 petroleum geology
- ☐ 21 petrology, experimental
- ☐ 22 petrology, igneous
- ☐ 23 petrology, metamorphic
- ☐ 24 petrology, sedimentary
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- ☐ 32 tectonics
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☐ This abstract was invited for the symposium titled Geology of the Central Savannah River Area

If you checked here, skip to item [4].

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[6] SPEAKER'S IDENTITY AND MAILING ADDRESS

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